

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

<p>APPELLANTS: Zeying Ma et al.</p> <p>SERIAL NO: 10/803,225</p> <p>FILED: March 16, 2004</p> <p>FOR: INK-JET IMAGING ON OFFSET MEDIA</p> <p>ART UNIT: 2854</p> <p>EXAMINER: Shema Taian Freeman</p> <p>DOCKET NO.: 82170125</p>	<p><b><u>CERTIFICATE OF MAILING</u></b> <b><u>UNDER 37 C.F.R. § 1.8</u></b></p> <p>DATE OF DEPOSIT: January 2, 2012</p> <p>I hereby certify that this paper or fee (along with any paper or fee referred to as being attached or enclosed) is being submitted on the date indicated above via:</p> <p><input checked="" type="checkbox"/> EFS Web</p> <p><input type="checkbox"/> facsimile to _____</p> <p><input type="checkbox"/> the United States Postal Service with sufficient postage as first class mail addressed to: Mail Stop _____, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.</p> <p>/brendawiseman/</p> <p>_____ Brenda Wiseman</p>
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**APPELLANTS' REPLY BRIEF UNDER 37 C.F.R. § 41.41**

HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P.O. Box 272400  
Fort Collins, Colorado 80528-9599

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450  
Mail Stop Appeal Brief – Patents

Dear Sir:

Appellants submit this Reply Brief in connection with their appeal from the final rejection of the Patent Office in an Action mailed March 28, 2011, and in response to the Examiner's Answer issued December 13, 2011.

I. STATUS OF CLAIMS

Claims 1-30 were originally presented in the subject application as filed on March 16, 2004. Claims 31-41 were added by amendment filed on February 4, 2008. Claims 2, 7-9, 18, and 23-25 were canceled at various points during prosecution. Thus, claims 1, 3-6, 10-17, 19-22, and 26-41, being the claims on appeal in this application, constitute all of the claims presently pending for consideration.

## II. GROUND S OF REJECTION TO BE REVIEWED ON APPEAL

The issues presented for review are:

(1) whether claims 1, 4, 10, 14, 16-17, 20, 22, 26-27, and 29-30 are unpatentable under 35 U.S.C. § 103(a) as being obvious over U.S. Patent Publication No. 2003/0169320 of Tomotake et al. (hereinafter “Tomotake”) in view of U.S. Patent No. 6,443,568 to Askeland et al. (hereinafter “Askeland”) and Japan Patent Application No. 2000-103044A of Nakamura et al. (hereinafter “Nakamura”);

(2) whether claims 3, 12, 13, and 19 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Tomotake in view of Askeland and Nakamura and further in view of U.S. Patent No. 6,412,935 to Doumaux (hereinafter “Doumaux”);

(3) whether claims 5, 6, 15, 21, and 28 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Tomotake in view of Askeland and Nakamura and further in view of U.S. Patent Publication No. 2002/0192003 of Koike et al. (hereinafter “Koike”);

(4) whether claim 11 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Tomotake in view of Askeland and Nakamura and further in view of U.S. Patent No. 6,450,632 to Tsang et al. (hereinafter “Tsang”);

(5) whether claims 31 and 38-41 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Tomotake in view of Koike and Nakamura;

(6) whether claims 32 and 34 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Tomotake in view of Koike and Nakamura and further in view of Askeland;

(7) whether claims 33, 36, and 37 are unpatentable under 35 U.S.C. § 103(a) as being obvious over Tomotake in view of Koike, Nakamura, and Askeland and further in view of

Doumaux; and

(8) whether claim 35 is unpatentable under 35 U.S.C. § 103(a) as being obvious over Tomotake in view of Koike, Nakamura, and Askeland and further in view of Tsang.

### III. ARGUMENT

#### A. Introduction

The arguments set forth in this Reply Brief are provided to supplement Appellants' arguments set forth in the Appeal Brief filed August 1, 2011 (hereinafter "Appeal Brief") by responding to the Examiner's arguments made particularly in the Examiner's Answer issued December 11, 2011 (hereinafter "Answer"). Any arguments presented by Appellants in the Appeal Brief but not repeated here are not to be construed as having been disavowed or withdrawn by Appellants absent an explicit statement to the contrary.

#### B. Rejections Under 35 U.S.C. § 103(a)

##### 1. Requirements of Prima Facie Obviousness

Claims 1, 3-6, 10-17, 19-22, and 26-41 remain finally rejected under 35 U.S.C. § 103(a) as being unpatentable over a number of references. The requirements of a rejection under 35 U.S.C. § 103(a) are discussed in section VII.B.1 of the Appeal Brief. They are also applicable to the following discussion and are incorporated here.

##### 2. The Rejection of claims 1, 4, 10, 14, 16-17, 20, 22, 26-27, and 29-30 over Tomotake in view of Askeland and Nakamura

The Examiner has maintained the rejection of claims 1, 4, 10, 14, 16-17, 20, 22, 26-27, and 29-30 as being unpatentable over Tomotake in view of Askeland and Nakamura. In the Appeal Brief, Appellants asserted that the cited references are not fairly combinable so as to support a *prima facie* case of obviousness against Appellants' claims. Particularly, Appellants explained that the unexpected result of the claimed invention (i.e. preserving or improving gloss

with use of a fixer) is not indicated in the cited references, and cannot be attributed to the teaching of those references. Appeal Brief, pages 13-14.

In the Answer, the Examiner points to the individual teachings of Tomotake and Askeland, asserting that Tomotake teaches that calendaring improves glossiness of aqueous inkjet ink, and that Askeland teaches use of a fixer underneath aqueous inkjet ink. The Examiner argues that “[a]ny decrease in glossiness due to the addition of a fixer solution seems to be inherently addressed with the calendaring process taught by Tomotake.” Answer, page 24.

Appellants submit that the Examiner’s case provides no evidence that calendaring would successfully and sufficiently address the effects of fixer on gloss of aqueous inkjet ink. That is, the loss of gloss due to fixer arises from a chemical interaction between the fixer and the ink and, as Appellants have taught, the effect is significant in degree. Appellants submit that one of skill in the art would not expect that the mechanical action of calendaring would successfully remedy the effect of a chemical fixer, i.e. that a printed image so treated would not still exhibit a significant loss of gloss. Appellants submit further that this lack of expectation of success is reflected in the avoidance of fixers in the method of Tomotake, where the use of fixers for providing durability was known in the art. Therefore, combining Askeland with Tomotake is not obvious under § 103(a) because it is contraindicated by the teaching of Tomotake and the knowledge in the art.

In the Appeal Brief, Appellants pointed out that the combination of Tomotake and Askeland with Nakamura failed to present a *prima facie* case of obviousness. In the Answer, the Examiner asserts that Nakamura need not be relied on to teach combining calendaring with printing a fixer to provide gloss, because Tomotake and Askeland provide this teaching. As stated above and in the Appeal Brief, Appellants maintain that Tomotake and Askeland do not

properly combine to present these elements. Therefore, the combination of Tomotake and Askeland with Nakamura still fails to present a *prima facie* case of obviousness against the claimed invention.

In view of the above, Appellants respectfully maintain that claims 1, 4, 10, 14, 16-17, 20, 22, 26-27, and 29-30 are allowable, and urge reversal of the rejection.

a. Claims 14 and 27

Appellants again assert the further patentability of certain dependent claims which set forth additional limitations not taught by the combination of Tomotake and Askeland with Nakamura.

In the Answer, the Examiner has pointed to the copolymers taught in paragraph 0128 of Tomotake and the particle sizes taught in paragraph 0131 of that same reference. Appellants maintain that these paragraphs do not teach particulates comprising randomly polymerized copolymers. Furthermore, Tomotake teaches that larger particle sizes degrade glossiness (again counteracting the intended effects of the method therein). As such, Appellants submit that Tomotake suggests a targeted selection of particulate characteristics, rather than a random one. Given that there is not a single first-order correlation between particle size and molecular weight, the limitations taught in Tomotake will not necessarily result in particulates meeting all of the requirements of claims 14 and 27.

In view of the above, Appellants maintain that claims 14 and 27 are patentable over the cited references on its particular merits, and urge reversal of the rejection.

3.     The Rejection of claims 3, 12, 13, and 19 over Tomotake, Askeland, and Nakamura in view of Doumaux

The Examiner has maintained the rejection of claims 3, 12, 13, and 19 as being unpatentable over Tomotake, Askeland, and Nakamura in view of Doumaux. In the Appeal Brief, Appellants asserted that there was no rationale in Doumaux for combining the teachings Tomotake and Askeland, or teaching or suggestion of the heating required by the claims and lacking in those references. Appellants noted further that Doumaux is not directed to printing aqueous ink-jet inks on offset media and is therefore not informative to the particular considerations involved in printing on that media. Appeal Brief, pages 16-17.

In the Answer, the Examiner has argued that this combination is valid, arguing that the reasons for including fixer taught in Doumaux and Askeland “are within the same field of endeavor” as the reason for including fixer in the claimed invention. Page 26. Appellants reiterate that printing on offset media with aqueous inkjet ink is sufficiently different from printing on plain paper (as taught in Doumaux), that a solution for one is not necessarily expected to be beneficial for the other. Therefore the Examiner’s characterization of Appellants’ reason for using fixer does not fully encompass the particular problem with which the applicant is concerned, because it does not take into account the considerations of printing on offset media. *Cf. In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). The fixer composition of Doumaux is particularly configured for printing on porous media, not offset media. As such, Appellants submit that the “simple substitution of one...for another” as the Examiner has asserted (Answer, page 26) is not reasonable.

In view of the above, Appellants submit that the cited references do not present a *prima*



*facie* case that the claims 3, 12, 13, and 19 are obvious. Therefore, Appellants respectfully request that the rejection be reversed.

4. The Rejection of claims 5, 6, 15, 21, and 28 over Tomotake, Askeland, and Nakamura in view of Koike

The Examiner has maintained the rejection of claims 5, 6, 15, 21, and 28 as being unpatentable over Tomotake, Askeland, and Nakamura in view of Koike. The deficiencies of Tomotake, Askeland, and Nakamura are discussed above and in Appellants' Appeal Brief and are applicable to this rejection. In the Appeal Brief, Appellants stated further that Koike fails to remedy the deficiencies of Tomotake, Askeland, and Nakamura. Page 18. Appellants noted also that Koike does not teach an overcoat composition for overprinting on a printed image as required by the present claims, and according to the applicable definition of "overprinting". *Id.*

In the Answer, the Examiner has argued that "appellant misinterprets the principle that claims are interpreted in the light of the specification." Page 26 (quoting *Constant v Advanced Micro-Devices Inc.*, 7 USPQ 2d 1064, 1065). While Appellants have defined "overprinting" as being when "a second printing solution is printed onto a first printing solution", the Examiner has asserted that this is only an example or embodiment that need not "be imparted into the claims to give meaning to disputed terms." *Id.* Appellants disagree with this assessment. Appellants point out that the holding in *Constant* was directed to a set of facts that are different from the facts of the present case. Specifically, the court in *Constant* pointed out that the patentee had failed to explicitly define terms in the specification so as to support the limitations the patentee was asserting. *Constant* at 1065. In contrast, Appellants' specification have explicitly defined

“overprinting” and “underprinting” as when “a second printing solution is printed onto a first printing solution”. Appellants’ specification, page 5, lines 18-23. Appellants maintain that a reasonable interpretation of “onto” does not include indirect application as the Examiner suggests. Therefore Koike fails to teach the arrangement expressly required by a reasonable interpretation of the claims.

In view of the above, Appellants submit that the cited references do not present a *prima facie* case that the claims 5, 6, 15, 21, and 28 are obvious.

a. Claims 15 and 28

In the Appeal Brief, Appellants maintain also that there are additional bases for the patentability of the limitations of claims 15 and 28 over the cited references. In the Answer, the Examiner has expressed the same position as with regard to claims 14 and 27. In reply, Appellants refer to the remarks made above in section III.B.2.a. In view of that rationale, Appellants maintain that claims 15 and 28 are patentable over the cited references on its particular merits, and urge reversal of the rejection.

5. Rejection of claim 11 over Tomotake, Askeland, and Nakamura in view of Tsang

The Examiner has maintained the rejection of claim 11 under 35 U.S.C. § 103(a) as being unpatentable over Tomotake in view of Askeland and Nakamura and further in view of Tsang. In the Appeal Brief, Appellants discussed the deficiencies of Tomotake, Askeland, and Nakamura with respect to the elements required by this claim as set forth in claim 1, and asserted that Tsang failed to remedy these deficiencies. Page 20. In the Answer, the Examiner has argued that

Tomotake, Askeland, and Nakamura are combinable to make a case that the elements of claim 1 are obvious, repeating the arguments offered with respect to claims 1, 4, 10, 14, 16-17, 20, 22, 26-27, and 29-30. Appellants have responded to these arguments in section III.B.2 above, and refer to those remarks as being responsive to the Examiner's arguments for this rejection. Appellants maintain that the cited combination of references fails to present a *prima facie* case of obviousness against claim 11.

6. Rejection of claims 31 and 38-41 over Tomotake in view of Koike and Nakamura

The Examiner has maintained the rejection of claims 31 and 38-41 under 35 U.S.C. § 103(a) as being unpatentable over Tomotake in view of Koike and Nakamura. In the Appeal Brief, Appellants explained that the combination of Tomotake with Nakamura cannot fairly be considered to teach or suggest the application of heat in the range required by these claims. Rather, at best this combination provides the heating roller of Nakamura, which could be used according to the teaching of Tomotake, i.e. the application of very high temperatures (where 100°C is a strict minimum). Appeal Brief, pages 20-21. Appellants also reiterated that Koike fails to teach an overcoat composition for overprinting with respect to the ink-jet ink as required by the present claims.

In the Answer, the Examiner again asserts the position that the overprinting required by the claims includes indirect printing. Appellants have addressed this assertion above with respect to the rejection of claims 5, 6, 15, 21, and 28, and that discussion is also applicable to this rejection. The Examiner also asserts that "Tomotake and Nakamura provide a suggestion and motivation for applying heat from 20 °C to 90 °C" because "Nakamura discloses a sufficient

temperature range that overlaps the temperature range disclosed in Tomotake”. Answer, page 28. However, as Appellants have pointed out, the overlap of the ranges of Tomotake and Nakamura excludes the range required by the claims. Furthermore, Tomotake teaches away from temperatures lower than 100 °C, and clearly suggests that lower temperatures are not expected to be successful in achieving the intended result (i.e. improving glossiness and storability). As such, Appellants maintain that, contrary to the Examiner’s assertions, Tomotake and Nakamura do not provide a suggestion or motivation for applying heat from 20 °C to 90 °C.

In view of the foregoing, Appellants maintain that claims 31 and 38-41 are patentable over the cited references, and respectfully urge the reversal of the rejection.

7. Rejection of claims 32 and 34 over Tomotake in view of Koike, Nakamura, and Askeland

The Examiner has maintained the rejection of claims 32 and 34 under 35 U.S.C. § 103(a) as being unpatentable over Tomotake in view of Koike and Nakamura and further in view of Askeland. In the Appeal Brief, Appellants discussed the deficiencies of Tomotake, Koike and Nakamura with respect to the elements required by this claim as set forth in claim 31, and asserted that Askeland failed to remedy these deficiencies. Pages 20-21. As Appellants have pointed out in the Appeal Brief and above in this Reply, none of the various combinations of these references teach or suggest all of the requirements of claim 31. These shortcomings are also applicable to the rejection of claims 32 and 34.

In the Answer, the Examiner relied solely on the same arguments for each reference that were asserted in rejecting the other claims at issue. Appellants have addressed each of these

arguments above, and reassert them against this rejection. In view of those remarks, Appellants maintain that claims 32 and 34 are patentable over the cited references, and urge reversal of the rejection.

8. Rejection of claims 33, 36, and 37 over Tomotake, Koike, Nakamura and Askeland in view of Doumaux

The Examiner has maintained the rejection of claims 33, 36, and 37 under 35 U.S.C. § 103(a) as being unpatentable over Tomotake in view of Koike, Nakamura, and Askeland and further in view of Doumaux. In the Appeal Brief and in the present Reply, Appellants have discussed the deficiencies of Tomotake, Koike, Nakamura and Askeland with respect to the elements required by this claim as set forth in claims 31 and 32. The whole of that discussion is also applicable to this rejection. In the Appeal Brief, Appellants further asserted that Doumaux fails to remedy these deficiencies, and reiterated the position that the teaching of Doumaux is inapposite to the practice of the claimed invention. Page 22.

In the Answer, the Examiner has relied on the same arguments on the same arguments that were asserted for each reference in rejecting the other claims at issue. Appellants have addressed each of these arguments above, and reassert them against this rejection. In view of those remarks, Appellants maintain that claims 33, 36, and 37 are patentable over the cited references, and urge reversal of the rejection.

9. Rejection of claim 35 over Tomotake, Koike, Nakamura, and Askeland in view of Tsang

The Examiner has maintained the rejection of claim 35 under 35 U.S.C. § 103(a) as being unpatentable over Tomotake in view of Koike, Nakamura, and Askeland and further in view of Tsang. The deficiencies of the combination of Tomotake, Koike, Nakamura, and Askeland with respect to the elements required by claim 31 are discussed in the Appeal Brief and above, and Appellants incorporate them here. Those deficiencies also apply to the rejection of claim 35, which depends from claim 31. In the Appeal Brief, Appellants further asserted that Tsang fails to remedy these deficiencies. Page 23.

In the Answer, the Examiner has relied on the same arguments on the same arguments that were asserted for each reference in rejecting the other claims at issue. Appellants have addressed each of these arguments above, and reassert them against this rejection. In view of those remarks, Appellants maintain that claim 35 is patentable over the cited references, and urge reversal of the rejection.

C. Conclusion

In conclusion, Appellants respectfully maintain that the claims on appeal are patentable. Particularly, the claims are nonobvious over the asserted combinations of references, in that they to teach or fairly suggest the arrangement of elements required by the claims, and to provide motivation or reason with the requisite specificity to one of ordinary skill in the art, within the meaning of 35 U.S.C. § 103, to arrive at the presently claimed invention based on its disclosure.

Appellants respectfully submit that all of the rejections should be overturned.

Dated this 2<sup>nd</sup> day of January, 2012.

/garypoakeson/

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Gary P. Oakeson  
Attorney for Appellants  
Registration No. 44,266

THORPE NORTH & WESTERN, LLP  
Customer No. 20,551  
P.O. Box 1219  
Sandy, Utah 84091-1219  
Telephone: (801) 566-6633

On Behalf Of:  
HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
3404 E. Harmony Road  
Mail Stop 35  
Fort Collins, CO 80528